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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/841,114	04/25/2001	Tsutomu Yamada	66382-21	6148

25269 7590 06/18/2003

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WASHINGTON, DC 20005

EXAMINER

ERDEM, FAZLI

ART UNIT	PAPER NUMBER
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2826

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/841,114

Applicant(s)

YAMADA, TSUTOMU

Examiner

Fazli Erdem

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

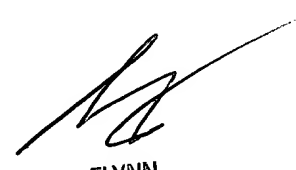
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


NATHAN J. FLYNN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuyama et al. (2001/0006408) in view of Funahata et al. (6,476,890) further in view of Koike et al. (6,040,885) further in view of Takatori et al. (6,504,592) further in view of Wong (6,441,878) further in view of Takedo et al. (EP 0884626).

Regarding Claims 1-15, Matsuyama et al. disclose an orientation division type liquid crystal display, fabrication method thereof and image display method where in an orientation division type liquid crystal display device for widen a viewing angle of a display pixel of an active matrix type liquid crystal color display device having a COT structure, pixel color layers, as color filter and pixel electrodes are formed on a substrate on the side of the pixel electrodes and slopes are provided along four side peripheries of each pixel electrode. Matsuyama et al. fail to disclose the required depression structure, color filter structure, spacer structure, anisotropy/dielectric constant structure, and vertical alignment structure. However, Funahata et al. disclose a reflective color liquid crystal display apparatus with colored polymer layer where the required depression structure is disclosed. Furthermore, Koike et al. disclose a liquid crystal display with three domains wherein molecules in the third domain are substantially vertically aligned regardless of voltage application where the required color filter structure is disclosed.

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Takatori et al. disclose a liquid crystal display and method of manufacturing the same and method of driving the same where the required spacer structure is disclosed. Wong discloses a liquid crystal display including pixel electrodes with split-positioned along first direction and longitudinal axis of liquid crystal molecules positioned along second direction where the required anisotropy/dielectric constant structure is disclosed. Finally, Takedo et al. disclose vertically aligned liquid crystal display device where the required vertical alignment structure is disclosed.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required depression structure, color filter structure, spacer structure, anisotropy/dielectric constant structure, and vertical alignment structure in Matsuyama et al. as taught by Funahata et al., Koike et al., Takatori et al., Wong, and Takedo et al. in order to have a liquid crystal display device with better performance.

2. Claims 16-19 rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuyama et al. (2001/0006408) in view of Yoon et al. (2001/0007487) further in view of Koike et al. (6,040,885) further in view of Takatori et al. (6,504,592) further in view of Tsuda et al. (6,525,797) further in view of Takedo et al. (EP 0884626).

Regarding Claims 16-19, Matsuyama et al. disclose an orientation division type liquid crystal display, fabrication method thereof and image display method where in an orientation division type liquid crystal display device for widen a viewing angle of a display pixel of an active matrix type liquid crystal color display device having a COT structure, pixel color layers, as color filter and pixel electrodes are formed on a substrate on the side of the pixel electrodes

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and slopes are provided along four side peripheries of each pixel electrode. Matsuyama et al. fail to disclose the required depression structure, color filter structure, spacer structure, anisotropy/dielectric constant structure, and vertical alignment structure. However, Yoon et al. disclose a liquid crystal display having wide viewing angle where the required depression structure is disclosed. Furthermore, Koike et al. disclose a liquid crystal display with three domains wherein molecules in the third domain are substantially vertically aligned regardless of voltage application where the required color filter structure is disclosed. Takatori et al. disclose a liquid crystal display and method of manufacturing the same and method of driving the same where the required spacer structure is disclosed. Tsuda et al. disclose a liquid crystal display device and its manufacturing method in which the alignment films having different characteristics where the required anisotropy/dielectric constant structure is disclosed. Finally, Takedo et al. disclose vertically aligned liquid crystal display device where the required vertical alignment structure is disclosed.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required depression structure, color filter structure, spacer structure, anisotropy/dielectric constant structure, and vertical alignment structure in Matsuyama et al. as taught by Yoon et al., Koike et al., Takatori et al., Tsuda et al, and Takedo et al. in order to make a liquid crystal display device with better performance.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fazli Erdem whose telephone number is (703) 305-3868. The examiner can normally be reached on M - F 8:00 - 5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (703) 308-6601. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

FE

June 16, 2003